

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

Annual Actuarial Report
as of
July 1, 2011

To Determine the Status of Funding
and the Normal Cost for the Plan Year
July 1, 2011 through June 30, 2012

Prepared By:

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**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

The valuation discussed in this report relates to the asset buildup for the period July 1, 2010 to June 30, 2011. It also includes the calculation of the normal cost and an appropriate range of contributions for the Plan Year July 1, 2011 to June 30, 2012. On the following pages are shown:

- I. Synopsis of Plan Features
- II. Summary of Fund Operations
- III. Summary of the Valuation Results
- IV. GASB No. 25
- V. Actuarial Valuation Certificate

Actuarial computations have been made, as in prior years, by the frozen initial liability method of calculation, which is designed to keep the past service costs and funds unaffected by any differences that may develop between actual experience and the assumptions. The effects of any differences that do develop are reflected in current service and future normal costs. If assumptions are changed or benefits and other plan features updated at any time, the frozen initial liability is adjusted to allocate costs between past and future service once again.

The maximum permitted compensation under IRS Code 401(a)(17) remained at \$245,000 and the plan maximum benefit limit under IRS Code 415(b)(1) remained at \$195,000. A Synopsis of Plan Features is presented in Section I.

There were 30 active participants, 2 terminated vested participants and 2 retired participants included in this valuation. A listing of the active participants, including benefit eligibility dates and ages, is attached as an appendix to this report.

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

I. Synopsis of Plan Features

| | |
|---|---|
| Effective Date | November 25, 1986 |
| Eligibility Requirements | First day of the month following completion of one Year of Service. Employees hired on or after May 10, 2008 become participants on the first day of the month following date of hire. |
| Compensation Used in Calculating Benefits | Average monthly earnings during the 60-month period ending on the last day preceding termination or retirement. Beginning in 2002 Compensation in excess of \$200,000, adjusted as permitted is excluded. The maximum allowable compensation for 2011 is \$245,000. |
| Normal Retirement Age | First day of the month next following attainment of age 65 |
| Benefit Formula | 1.85% of Final Average Earnings multiplied by Years of Service up to 25 years, plus 0.7% of Final Average Earnings multiplied by Years of Service in excess of 25 years |
| Normal Annuity Form | Life Annuity with automatic change to 50% Joint and Survivor with reduced benefits for married Participants, unless Participant elects another option |
| Early Retirement Provision Eligibility | Later of (i) age 55 with 5 years of service and (ii) date age plus service equals or exceeds 70 |
| Reduction Factor | No reduction for age 62 with 20 Years of Service, 63 with 19 Years of Service, or 64 with 17 Years of Service. Otherwise reduction is based on plan schedule. |

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

I. Synopsis of Plan Features (continued)

| | |
|---|---|
| Deferred Retirement Provision | Retirement benefit based on Years of Service and Final Average Earnings at actual retirement |
| Disability Retirement Provision | For employees with 10 Years of Service, 1.15% of Final Average Earnings multiplied by Years of Service. If the sum of attained age plus years of service equals or exceeds 75, minimum benefit is \$150 per month |
| Death Benefit Before Retirement | For participants who die while actively employed with 10 Years of Service, Spouse's benefit for all vested married Participants payable immediately equal to 100% of the benefit the Participant would have received if termination occurred on date of death and Participant elected 100% Joint and Survivor Annuity. For terminated Participants, with 10 Years of Service, Spouse's benefit for Vested Married Participants payable at age 55 is equal to 50% of the benefit the Participant would have received if termination occurred on date of death and Participant elected 50% Joint and Survivor Annuity |
| Vested Benefits if Employee Quits or is fired | 100% after 5 Years of Service |
| Years of Service Counted in Determining Vesting | All years of credited service |
| Contributions | Plan cost is paid by the Employer, except employees hired on or after May 10, 2008 are required to contribute 1% of Earnings. |

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

II. Summary of Fund Operations

Market Value of Fund on Prior Valuation Date **\$ 6,069,607**

Receipts

Employer Contributions \$ 247,800

Investment Increment 1,165,302*

Total Receipts **\$ 1,413,102**

Disbursements

Payments to Participants \$ 1,276,817

Administrative Expenses 12,448

Investment Expenses 47,499

Total Disbursements **\$ 1,336,764**

Market Value of Fund on Current Valuation Date **\$ 6,145,945**

*Investment increment includes the following:

Interest and dividend income \$ 147,718

Realized gain (loss) 327,769

Unrealized appreciation (depreciation) 695,733

Other Income (5,918)

\$ 1,165,302

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY
III. Summary of the Valuation Results**

Computation of the Amortization of Frozen Initial Liability

| | | |
|--|----|---------|
| The liability established as of July 1, 2010 | \$ | 509,661 |
| A. The frozen initial liability remaining unfunded at the beginning of the prior plan year | | 509,661 |
| B. The normal cost for the prior plan year | | 158,082 |
| C. Interest at 8% on A+B for the year | | 53,419 |
| D. Contributions for the prior plan year | | 247,800 |
| E. Interest at 8% on D from dates paid to the end of the plan year | | 8,671 |
| F. The frozen initial liability remaining unfunded as of July 1, 2011 A+B+C-D-E | | 464,691 |

Determination of Normal Cost

| | | |
|--|----|------------|
| A. The present value as of the valuation date of all future benefits | \$ | 7,395,099 |
| B. The assets as of the valuation date | | 6,145,945 |
| C. The frozen initial liability remaining unfunded as of the valuation date | | 464,691 |
| D. The present value of those benefits which are to be funded through future normal cost payments, A – B – C | | 784,463 |
| E. The present value of the expected future compensation of all active members of the plan from the valuation date to their assumed retirement dates | | 15,014,256 |
| F. The normal contribution rate, D ÷ E | | 5.2% |
| G. The annual compensation of active members under assumed Normal Retirement Age | | 2,039,943 |
| H. The normal cost, F x G | | 106,583 |
| I. The normal cost payable at the end of the plan year, H x 1.08 | | 115,110 |

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

III. Summary of Valuation Results

For the Plan Year Beginning
July 1, 2011 and ending June 30, 2012

**1. Calculating Payments Based on Funding Past Service Liability
Over 10 Years:**

| | | |
|----|---|------------|
| A. | The frozen initial liability as of July 2010 (Based on July 1, 2010 fresh start) | \$ 509,661 |
| B. | 14.903% of A | 75,955 |
| C. | The normal cost for the period from July 1, 2011 to June 30, 2012, payable June 30, 2012 | 115,110 |
| D. | The total of B + C | 191,065 |
| E. | This represents as a percentage of covered payroll | 9.4% |

**2. Calculating Payments Based on Funding of Unfunded Past Service Liability
Over Average Remaining Working Life of Active Participants:**

| | | |
|----|--|---------|
| A. | 14.674% of unfunded frozen initial liability | 68,187 |
| B. | The total of A + 1C | 183,297 |
| C. | This represents as a percentage of covered payroll | 9.0% |

**3. Calculating Payments Based on Funding Past Service Liability
Over 30 Years:**

| | | |
|----|--|-----------|
| A. | 8.883% of frozen initial liability | \$ 45,273 |
| B. | The total of A + 1C | 160,383 |
| C. | This represents as a percentage of covered payroll | 7.9% |

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

III. Summary of the Valuation Results

Present Value of Vested Benefits

| | <u>Number of Participants</u> | <u>Present Value of Vested Benefit*</u> |
|---|--|--|
| A. Retired | 2 | \$ 373,276 |
| B. Vested terminated | 2 | 75,577 |
| C. Actives - Eligible for Normal Retirement | 1 | 454,808 |
| D. Actives - Eligible for Early Retirement | 14 | 4,532,882 |
| E. Other Actives | | |
| (1) Employees fully vested | 15 | 1,660,124 |
| (2) Employees with no vesting | <u>0</u> | <u>0</u> |
| F. Total | 34 | \$ 7,096,667 |

The present value of non-vested accrued benefits is \$ 0.

* For non-retired participants, values are based on actuarial assumptions used for payment of lump sum distributions during the current plan year

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

IV. GASB No. 25

**Notes to the Financial Statements
for the Fiscal Year ended June 30, 2011**

The Bristol County Water Authority (BCWA) administers a defined benefit pension plan, The Pension Plan for Employees of Bristol County Water Authority.

A. Summary of Significant Accounting Policies

Basis of Accounting. The Plan's financial statements are prepared using the accrual basis of accounting. Employer contributions to this Plan are recognized when paid. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

Method Used to Value Investments. Investments are reported at fair value. Short-term investments are reported at cost, which approximates fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates.

B. Plan Descriptions and Contribution Information

Membership of the Plan consisted of the following at July 1, 2010, the date of the latest actuarial valuation:

| | |
|---|-----------|
| • Retirees and beneficiaries receiving benefits | 1 |
| • Terminated plan members entitled to but not yet receiving benefits | 2 |
| • Active plan members | <u>34</u> |
| Total | 37 |

Plan Description. The Plan is a single-employer defined benefit pension plan that covers the employees of the BCWA. The Plan provides retirement, disability and death benefits to plan members and their beneficiaries. The Plan assigns the authority to amend the benefit provisions of the plan to the Employer.

Contributions. Plan members are not required to contribute to the Plan. The BCWA is responsible for funding the cost of all benefits. Investment costs of the Plan are financed through investment earnings. Administrative costs are paid by the BCWA.

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

IV. GASB No. 25 (continued)

Statements of Plan Net Assets
as of June 30, 2011 and 2010

| | <u>2011</u> | <u>2010</u> |
|--|------------------------|-------------------------|
| Assets | | |
| Cash and short-term investments | \$ 182,808 | \$ 181,879 |
| Receivables | | |
| Employer contribution | 0 | 0 |
| Interest and dividends | <u>22,097</u> | <u>27,819</u> |
| Total receivables | 22,097 | 27,819 |
| Investments, at fair value | | |
| U.S. government obligations | 155,256 | 56,454 |
| Corporate & foreign bonds | 1,556,673 | 2,055,113 |
| Common equities | 2,883,053 | 3,089,595 |
| Mutual Funds | <u>1,346,058</u> | <u>658,747</u> |
| Total investments | 5,941,040 | 5,859,909 |
| Total Assets | \$6,145,945 | \$ 6,069,607 |
| Liabilities | | |
| Payables | <u>0</u> | <u>0</u> |
| Net assets held in trust for pension benefits | \$6,145,945 | \$ 6,069,607 |

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

IV. GASB No. 25 (continued)

Statements of Changes in Plan Assets
For the Years Ended June 30, 2011 and 2010

| | <u>2011</u> | <u>2010</u> |
|---|-----------------------|---------------------|
| Additions | | |
| Contributions | | |
| Employer | 247,800 | 185,878 |
| Total Contributions | \$ 247,800 | \$ 185,878 |
| Investment Income | | |
| Net appreciation (depreciation) in fair value of investments | \$ 1,023,502 | \$ 422,863 |
| Interest | 98,182 | 98,202 |
| Dividends | 49,536 | 46,940 |
| Miscellaneous | (5,918) | 2,128 |
| (Less) investment expense | (47,499) | (44,385) |
| Net investment income | \$ 1,117,803 | \$ 525,748 |
| Total Additions | \$ 1,365,603 | \$ 711,626 |
| Deductions | | |
| Benefits | \$ (1,276,817) | \$ (5,606) |
| Net Administrative Expenses | (12,448) | (47,199) |
| Total Deductions | \$ (1,289,265) | \$ (52,805) |
| Net Increase | \$ 76,338 | \$ 658,821 |
| Net assets held in trust for pension benefits | | |
| Beginning of year | \$ 6,069,607 | \$ 5,410,786 |
| End of year | \$ 6,145,945 | \$ 6,069,607 |

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

IV. GASB No. 25 (continued)
Schedule of Funding Progress

| Actuarial Valuation Date | Actuarial Value of Assets (a) | FEA* Actuarial Accrued Liability (AAL) (b) | Unfunded AAL (UAAL) (b) – (a) (c) | Funded Ratio (a)/(b) | Covered Payroll (d) | UAAL as % of Covered Payroll (c)/(d) |
|---------------------------------|--------------------------------------|---|--|-----------------------------|----------------------------|---|
| 07/01/2004 | 4,556,059 | 4,531,518 | 0 | 100.5 | 1,928,499 | 0.0 |
| 07/01/2005 | 4,960,489 | 5,020,387 | 59,898 | 98.8 | 2,010,344 | 3.0 |
| 07/01/2006 | 5,385,288 | 5,454,797 | 69,509 | 98.7 | 1,973,549 | 3.5 |
| 07/01/2007 | 5,748,408 | 5,598,552 | 0 | 102.7 | 2,021,777 | 0.0 |
| 07/01/2008 | 6,114,085 | 6,045,187 | 0 | 101.1 | 2,389,203 | 0.0 |
| 07/01/2009 | 5,410,786 | 6,717,545 | 1,306,759 | 80.6 | 2,409,334 | 54.2 |
| 07/01/2010 | 6,069,607 | 6,579,268 | 509,661 | 92.3 | 2,382,503 | 21.4 |

**Frozen Entry Age*

Schedules of Employer Contributions

| <u>Year Ended June 30</u> | <u>Annual Required Contribution</u> | <u>Percentage Contributed</u> |
|----------------------------------|--|--------------------------------------|
| 2005 | 208,171 | 100 |
| 2006 | 231,264 | 55 |
| 2007 | 223,602 | 100 |
| 2008 | 198,637 | 100 |
| 2009 | 231,547 | 55 |
| 2010 | 404,931 | 46 |
| 2011 | 247,606 | 100 |

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

- Valuation date 07/01/10
- Actuarial cost method Frozen Entry Age with Costs Allocated
- Amortization method Level Dollar – Closed over Earnings
- Remaining amortization period 10 Years
- Asset valuation method Market
- Actuarial assumptions:
 - Investment rate of return 8.0% pre-retirement, 6.0% post-retirement
 - Projected salary increases 3.0%

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

V. Actuarial Valuation Certificate

Benefit Management has calculated the figures needed for an Actuarial Valuation of this plan as of July 1, 2011, using accepted actuarial principles. The employee data was supplied by the employer. The financial data was supplied by Washington Trust. The calculations were completed on the basis of this information and the actuarial method and assumptions as follows:

| | |
|---------------------------------|--|
| Actuarial Cost Method | Entry age normal with frozen initial liability |
| Interest | |
| Pre-retirement | 8% Compounded annually |
| Post-retirement | 6% Compounded annually |
| Mortality forfeitures and costs | |
| Pre-retirement | 2011 Applicable Mortality Table from Rul 2006-67 |
| Post-retirement | 2011 Applicable Mortality Table from Rul 2006-67 |
| Retirement age | Normal retirement age (65) |
| Normal form | Life Annuity |
| Salary progression | 3% Compounded annually |

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

V. Actuarial Valuation Certificate (Continued)

| | |
|---------------------------------|--|
| Expenses | Assumed paid separately |
| Disability costs | See disability rates below |
| Vesting costs | See turnover rates below. |
| Joint and survivor benefit cost | Based on mortality assumptions indicated above with assumption that 90% of males and 70% of females have eligible spouses at date of death |
| Assets basis | Market Value |

Pre-Retirement Decrement Rates

| Age | Mortality% | | Withdrawal% | | Disability% | |
|-----|------------|--------|-------------|--------|-------------|--------|
| | Male | Female | Male | Female | Male | Female |
| 20 | 0.017 | 0.017 | 5.000 | 5.000 | 0.060 | 0.060 |
| 25 | 0.022 | 0.022 | 5.000 | 5.000 | 0.060 | 0.060 |
| 30 | 0.030 | 0.030 | 3.750 | 3.750 | 0.060 | 0.060 |
| 35 | 0.052 | 0.052 | 2.500 | 2.500 | 0.089 | 0.089 |
| 40 | 0.068 | 0.068 | 1.500 | 1.500 | 0.183 | 0.183 |
| 45 | 0.093 | 0.093 | 0.750 | 0.750 | 0.306 | 0.306 |
| 50 | 0.130 | 0.130 | 0.000 | 0.000 | 0.492 | 0.492 |
| 55 | 0.231 | 0.231 | 0.000 | 0.000 | 0.804 | 0.804 |
| 60 | 0.475 | 0.475 | 0.000 | 0.000 | 1.202 | 1.202 |

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

V. Actuarial Valuation Certificate (Continued)

This report has been prepared in accordance with generally accepted actuarial principles and practices and, to the best of my knowledge, fairly reflects the actuarial condition of the PENSION PLAN FOR EMPLOYEES OF BRISTOL COUNTY WATER AUTHORITY.

In my opinion, the assumptions used in preparing the actuarial report to which this certification is attached, for the PENSION PLAN FOR EMPLOYEES OF BRISTOL COUNTY WATER AUTHORITY, (a) are in the aggregate reasonably related to the experience of the plan and to the reasonable expectations, and (b) represent my best estimate as of the valuation date of anticipated experience under the plan. The report and accompanying tables (which describe the actuarial assumptions and methods employed and summarize the principal eligibility and benefit provisions upon which the valuation was based) are complete and accurate to the best of my knowledge.

In preparing the report I have relied upon (a) information on employees provided by the Plan Sponsor, which maintains records for the plan, and (b) information regarding plan assets as provided by the Trustee. Further, we have made such tests as to the reasonable accuracy of the employee data in accordance with generally accepted actuarial principles and practices.

Future actuarial measurements may differ significantly from the measurement presented in this report due to such factors as plan experience differing from that anticipated, changes in economic or demographic assumptions, and changes in plan provisions or applicable law. In addition, determinations of the condition of the plan for other purposes, such as satisfying the reporting requirements of the Government Accounting Standards Board, if any, and measuring the level of funding for plan termination, may require different assumptions and methods and the results may differ significantly from those presented here.

To the best of my knowledge, there is no conflict of interest which would impair, or appear to impair, the objectivity of my work on this assignment. If the information contained in this report is provided to others, the report should be provided in its entirety to limit the risk of misinterpretation. Please contact me if you require additional explanations for any item(s) contained in this report or for any other communications related to my engagement as actuary for the plan.

**PENSION PLAN FOR EMPLOYEES OF
BRISTOL COUNTY WATER AUTHORITY**

V. Actuarial Valuation Certificate (Continued)

The following is a summary of the results of this report (calculated as of the first day of the plan year):

| | |
|---|------------|
| The fresh start frozen initial liability as of July 1, 2010 | \$ 509,661 |
| The frozen initial liability remaining unfunded as of the valuation date is | 464,691 |
| The normal cost for the plan year starting July 1, 2011, due June 30, 2012 is | 115,110 |

The funding range for plan year beginning July 1, 2011 is:

| | |
|---------------------------|---------|
| 10 Year Amortization | 191,065 |
| Working Life Amortization | 183,297 |
| 30 Year Amortization | 160,383 |

BENEFIT MANAGEMENT INC.

Robert I. Bostian, Jr., F.S.A., M.A.A.A.
Enrolled Actuary #11-01255
Executive Vice President

I am a member of the American Academy of Actuaries and I meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein.